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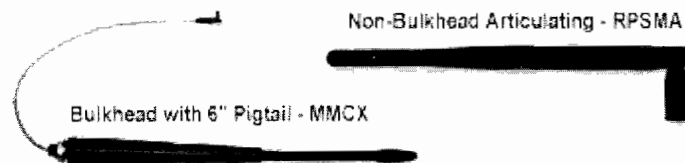
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Whip antennas

Quarter-wave (monopole) and half-wave (dipole) antennas provide you an FCC approved method for in of your MaxStream™ [wireless OEM modules](#).

Quarter-Wave & Half-Wave Whip Antennas



- [900 MHz whip \(1/2-wave & 1/4-wave\) antenna part number generator](#)
- [2.4 GHz whip \(1/2-wave\) antenna part number generator](#)
- [Email sales@maxstream.net](mailto:sales@maxstream.net)
- Call our sales department **toll-free (866) 765-9885**

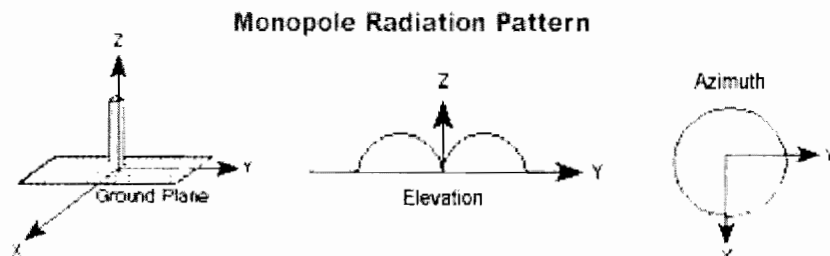
Note: Each application has different antenna requirements as determined by the desired transmit distance conditions and network architecture. There are various options for antennas with trade-offs of cost, size

Factors that affect the performance of the antennas are RF cable length, height of antennas off the ground, radiation pattern and gain of the antennas. An RF communications system should be designed such that the absolute minimum signal level arrives at the receiver. This will allow some "link margin" in situations where the environment degrades the signal.

For example: the 9XStream 9600 baud wireless module can decode a signal arriving at the antenna port at -110dBm. Assume in a certain installation the signal is arriving at a level of -108 dBm and the link is weak. If a person walks between the antennas, a tree grows up, tree leaves come out or a heavy rain storm comes, the link could be attenuated by as much as 3 to 6dB. This attenuation might push it over the edge and the link will stop working. It is good practice to have 6 to 10dB of "link margin" to ensure the link will perform reliably over time. Understanding of the options and considerations will help any installer build a reliable system.

Whip Quarter-Wave (Monopole) Antennas

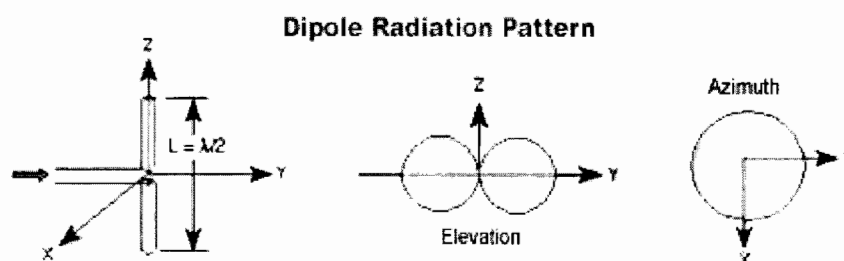
Quarter-wave antennas require a ground plane.



1/4-Wave Antenna Type	Gain (dBi)	Frequency Range (MHz)	Feed Connector	Length
Whip Non-Bulkhead Articulating	-	902-928	RPSMA Male	3"
Whip Non-Bulkhead Articulating	-	2400-2480	RPSMA Male	3"
Whip Bulkhead w/ 6" Pigtail	-	902-928	MMCX Male	3"
Whip Bulkhead w/ 6" Pigtail	-	2400-2480	MMCX Male	3"

Whip Half-Wave (Dipole) Antennas

Half-wave antennas are made up of two quarter-wave length elements. The gain they provide promote directional transmission range than quarter-wave antennas. Half-wave antennas do not require a groun



1/2-Wave Antenna Type	Gain (dBi)	Frequency Range (MHz)	Feed Connector	Length
Whip Non-Bulkhead Articulating	2	902-928	RPSMA Male	6.75"
Whip Non-Bulkhead Articulating	-	2400-2500	RPSMA Male	5.5"
Whip Bulkhead w/ 6" Pigtail	2	902-928	MMCX Male	7"
Whip Bulkhead w/ 6" Pigtail	-	2400-2500	MMCX Male	5.5"

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- [900 MHz vs. 2.4 GHz](#) - Which license-free radio frequency to use?
- [RF basics](#) - Radio frequency facts and concepts you should learn...
- [Glossary of terms](#) - Radio frequency terms and their meanings...
- [Questions & Answers](#) - Access to all frequently asked questions...

- [24XStream™ 2.4 GHz](#)

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